

OODA

SCRUM

Agile Methods Embedded in the United States Military War Fighting Methods

How **OODA War Fighting**
Stacks up Against
Agile Software Development

Reflections of a **Crew Dog** / **Scrum Master**





AGILE ON TARGET_{LLC}

Tom Friend AKA Mad-Dog
LtCol Retired USAF

SCRUM

Tom Friend / Experience

 **Industry Experience:**
Banking, Cable - Broadband, Healthcare, Energy, Federal Sector.


 **Roles:**
Agile / XP / Scrum, QA, DEV, BA, PM, Federal Program Manager.

 **Education:**

- BS Aeronautics / Embry Riddle Aeronautical University.
- Air War College / US Military.



.....

 **24 Years US Military Pilot, Retired:**

- 10 Years Navy / 14 Years Air Force.
- 2 Squadron Commands / 12 Deployments.
- JTAC Ground Combat with Marines and Army.






OODA

Summary / Goals

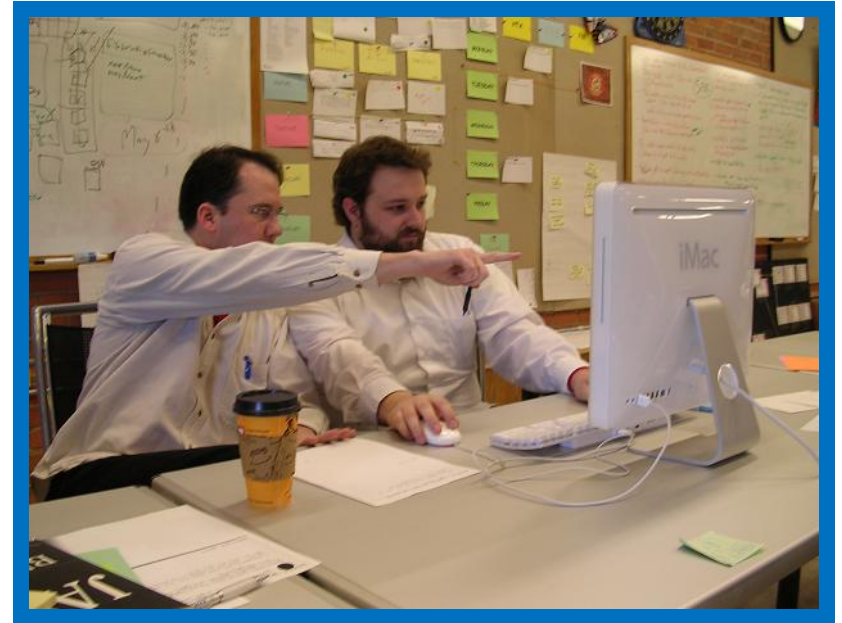
- 🎯 TAKE AWAY - Military decision makers know Agile / Scum only by different terms.
- 🎯 Goal - Provide bridge of understanding between OODA and AGILE SCRUM for Military and DOD contractors that are unfamiliar with the Agile Methodologies.
- 🎯 Goal - Present talk tracks and narratives that demonstrate how the Agile Methodology complements OODA.

Observe, Orient, Decide, ACT

-  **OODA** - Loop is a more detailed refinement of Scrum's **Inspect and Adapt cycle**.
-  **OODA** - Was created as a method for fighting dogfights. The focus being to provide an adaptive method that lets you out-think your opponent and win in the air and on the battle field.
-  **OODA** - It is very much like the in the weeds **collaborative self organizing part of scrum**.

Wingman = Pair Programming

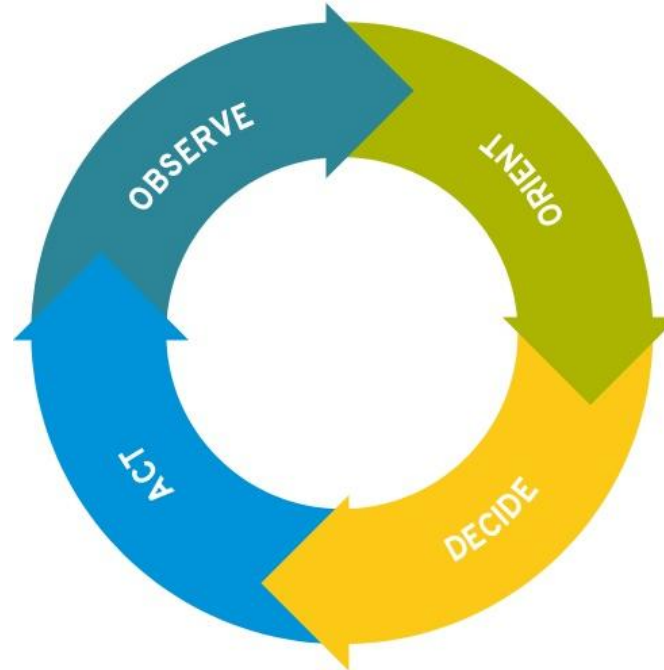
2 People with a common goal



Colonel John Boyd (USAF Ret)

- 🎯 “40-Second Boyd” (Korean War)
 - “Mad Major” (Helped design the F-15 & F-16)
 - “Genghis John”
- 🎯 The OODA Loop & Maneuver Warfare
 - U.S. Marine Corps
 - Both Gulf Wars

John Boyd Father of OODA Koran War F-86 Pilot



 Slow OODA Loop = Death

 Fast OODA Loop = Success

Comparing the Loops

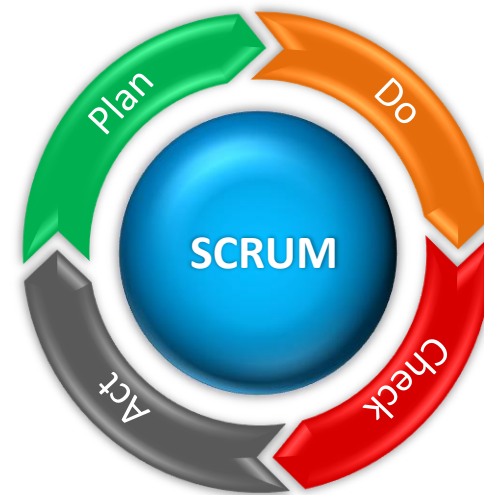
OODA



Empirical Process,
Transparency, Inspect, and
Adapt

=

SCRUM



Empirical Process,
Transparency, Inspect, and
Adapt

Operating Inside Their OODA Loops



OODA Tactical Definition:

- Changing the situation more rapidly than the other side can comprehend. (Think Agile to Waterfall)



Typical effects:

- Boyd description: When operating inside opponents' OODA loops, It's like they're moving in slow motion." "It's like you're commanding both sides."
- This is a classic adaptation of Sun Tzu's cheng / ch'i.
 - cheng - "orthodox, expected,"
 - ch'i - "unorthodox, unexpected, shocking."
- By operating inside an opponent's OODA loop, you will find it much easier to set up and exploit cheng / ch'i situations.

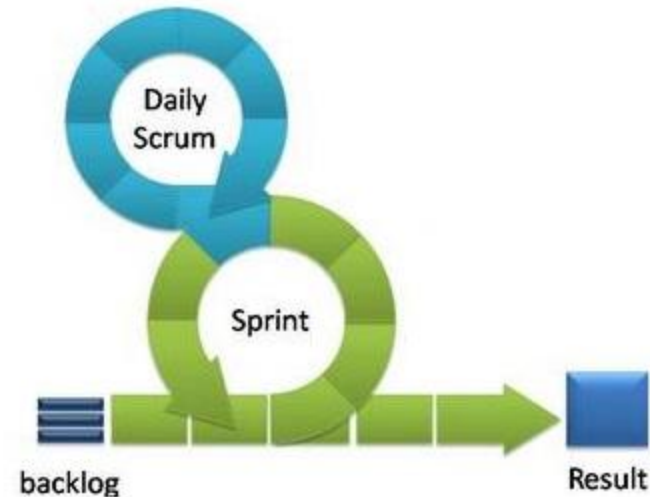
Inside Your OODA /Sprint Scrum Loops

OODA



Within your Opponents Decision Loop

SCRUM



Within your Sprint Decision Loop



OODA Success = Kill



SCRUM Success = Deliver Increment

Combat Multipliers = AGILE ROI

- 🎯 "MiG Alley" NW Korea, where the Yalu River empties into the Yellow Sea and the site of numerous dogfights.
- 🎯 MiG-15 VS F-86 Sabre
- 🎯 MiG Alley is considered the birthplace of jet fighter combat.
- 🎯 Kill ratio was 10 to 1





Mig-15 vs F-86F “Well Matched”



- 🎯 The Sabre and Mig were well matched in Air Combat
 - The Mig was somewhat underpowered and the MiG-15 could out climb it.
 - The MiG's cockpit ergonomics were inferior to the F-86
 - The F-86 turned and rolled better than the MiG.
 - Mig-15 had bigger and more powerful guns, The F-86 carried more ammo.
 - MiG had a higher service ceiling over the Sabre.

- 🎯 The close balance between the F-86 and the MiG-15 meant that the critical factor in the air battle was pilot training skill and tactics.
 - At the end of the war 792 MiG-15s Lost To 78 F86 Lost.

- 🎯 Chuck Yeager said it best-
 - "It isn't the plane that is important in combat, it's the man sitting in it."

Boyd's OODA Loop Applied

Relates to all human behavior

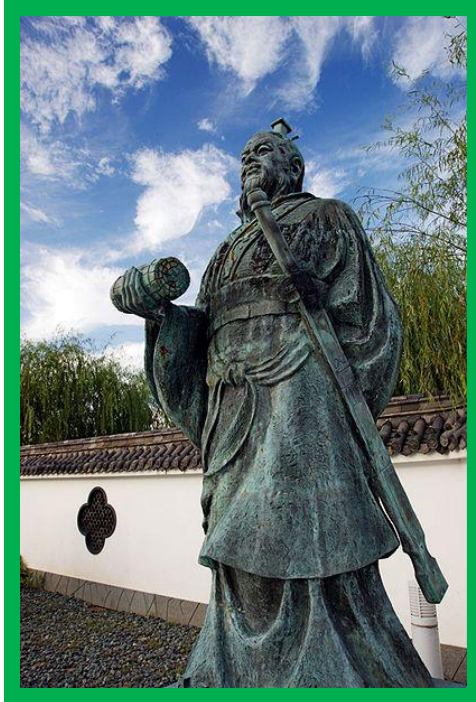
Goal: Successful interaction with other loops

Key: Get inside the opposing OODA Loop

🎯 Destructive: Air Combat, Warfare

🎯 Constructive: Agile Software Engineering Process





Sun Tzu

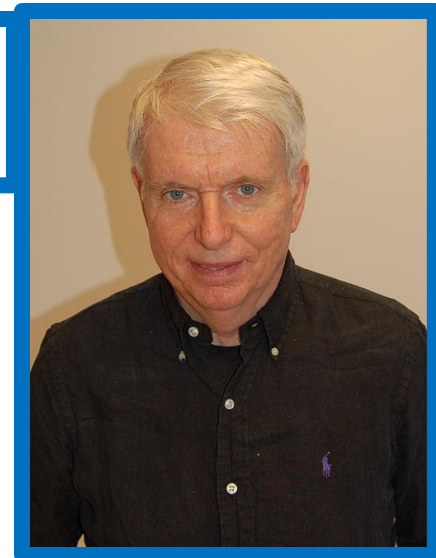
Be extremely subtle, even to the point of formlessness. Be extremely mysterious, even to the point of soundlessness. Thereby you can be the director of the opponent's fate.

- Sun Tzu The art of War 512 BC

Jeff Sutherland

Scrum is not a process or a technique for building products; rather, it is a framework within which you can employ various processes and techniques.

- Jeff Sutherland USAF Retired / Scrum Guide 2011



OODA

SCRUM



AGILE ON TARGET_{LLC}

QUESTIONS?

Tom Friend

980-939-3477

www.AgileOnTarget.com

About me: <http://www.linkedin.com/pub/thomasfriend>